The Citrus Industry
EXCLUSIVE SPECIALIZED CITRUS PUBLICATION
Issued Monthly
Representative of every interest
Representing no special interest

Publication office at Bartow, Florida. Entered as second class matter February 16th, 1920, at the post office at Tampa, Florida, under the act of March 3, 1879. Entered as second class matter June 19, 1933, at the post office at Bartow, Florida, under act of March 3, 1879.

State Horticultural Society To Meet At Hollywood April 18, 19, 20

The Florida State Horticultural Society will hold its Fifty-Second Annual Meeting in the Hollywood Beach Hotel, at Hollywood, Florida, on April 18, 19 and 20, 1939. A number of outstanding speakers from out of the state have been booked, with others tentatively committed. The citrus program will emphasize soils, scale control, melanose, the handling of drought injured trees, nutritional sprays and marketing. The sub-tropical fruit program (Krome Memorial Institute) will discuss avocadoes, pineapples, papayas, mangos and limes.

Soil Science Society

The first session of the meetings of the Horticultural Society and its affiliates will be at 2:00 p. m. on Tuesday, April 18. At this time there will be an organization meeting of the Florida Unit of the Soil Science Society of America. A program on Florida soils will be given that will be of particular interest to citrus and vegetable growers and others who are interested in Florida soils and their handling. This is an open meeting and those interested are urged to attend.

Opening Session

The usual opening session of the Horticultural Society will be held at 8:00 P. M. on Tuesday evening. A speaker of national standing has been invited to give the main address. The memorial service will be held at the end of this session.

Wednesday Meetings

The Wednesday morning meeting that will convene at 9:30 A. M. will be a joint session with the Soil Science Group. The subjects to be discussed on this program are the organic cycle in the soil, exchangeable magnesium in Florida soils, rapid soil test methods and elemental soil deficiencies. Following these, one hour will be devoted to the answering of questions from the floor or from the Question Box. This part of the program is to be given preference and will be led by R. S. Edsall of Wabasso.

Wednesday Afternoon

On Wednesday afternoon, the Krome Memorial Institute will have the program that will be devoted to a discussion of avocadoes, mangos, papayas, pineapples, limes and other sub-tropical fruits and varieties, soil treatments, disease and pest control, maturity studies and other topics of timely interest will be discussed.

Banquet

On Wednesday night, there will be a banquet in the main dining room of the Hollywood Beach Hotel for the members of the Society, the affiliated organizations and their friends. A program, both serious and light, is being arranged for this and it promises to be a brilliant affair. Charlie McCarthy will not be there but there will be entertainers equally good.

Thursday

On Thursday morning the Society will get down to heavy work again, with the morning session devoted to a discussion of factors in diagnosing grove conditions; the place of nutritional sprays in the spray and dust program; factors influencing the development and control of scale insects on citrus; the effect of drought on citrus trees and on citrus grove practices; and melanose control. These are all timely subjects and will be discussed by men who are authorities. The subjects cover items of greatest importance in the grove practices for the year.

The meeting will reach its peak on Thursday afternoon when marketing and factors that have influence on the marketing of citrus fruit, such as maturity, methods of handling, and other pertinent subjects, will be considered. A speaker of national standing has been invited to address the Society at this time and he should be heard by every grower and shipper in the state.

The Thursday night program will be devoted to a discussion of items of general interest and to the usual business session.

Friday, April 21

On Friday at 9:00 A. M. a motorcade will leave the hotel for a trip to the Fairchild Tropical Garden and the Sub-Tropical fruit section south of Miami. Various lime, avocado and other sub-tropical fruit

plantings will be visited along with the Sub-Tropcial Experiment Station and other points of interest along the way. Those who wish to see this section at close hand under competent guidance will be able to do so under exceptionally favorable conditions.

New Section Of Society Devoted To Vegetables To Be Formed

For a number of years there has been a demand that papers of interest to vegetable growers be placed upon the program. This has not appeared feasible until this year. On Thursday morning, April 20, a program of direct interest to the vegetable growers will be given. This meeting will be held in a separate room and will run co-incident with the Thursday morning program of the Society that has already been referred to. R. A. Carlton of West Palm Beach has been appointed temporary chairman of this meeting. There will be only one session of this division this year. If sufficient interest is shown, it will become a section of the Society, occupying the same status as the Krome Memorial Institute. Tariffs, better seed, new crops and items of interest will be discussed this year. The vegetable growers are urged to attend, and take an active interest in this new organization.

Florida Rose Society

The Fourteenth Annual Meeting of the Florida Rose Society will be held on Wednesday, April 19. The first session will open at 10:00 A. M. in the Hollywood Beach Hotel. This program will consist of a series of addresses covering new and old varieties, diseases, pests, commercial cut flower production, roses in landscape work and other phases.

At 2:00 P. M. the Society will be addressed by Dr. J. Horace McFarland, President Emeritus of the American Rose Society, and Editor of the American Rose Annual. Dr. McFarland is an internationally known authority in the rose world and he will be heard with great interest by both amateur and commercial rose growers in Florida. There will be other out of state speakers followed by a round table discussion of Florida rose growing.

Florida State Rose Show

The Fourteenth Annual Florida State Rose Show which will be staged in the lounge of the Hollywood Beach Hotel promises to be bigger and better than ever. It is to be directed by Frank Stirling of Davie and representatives from the Garden Clubs of Hollywood and Ft. Lauderdale. The American Rose Society schedule will be used in the exhibit classifications. Material has been promised from all parts of the state.

The Show will open at 11:00 A. M. on Wednesday, April 19, and will continue until noon Thursday, April 20.

Open To All

The sessions of the Florida State Horticultural Society, the Krome Memorial Institute, and the Florida Rose Society are open to the general public and those interested in Florida horticulture are urged to attend.

Hammett Voices Opinion

Florida citrus growers have within their grasp the opportunity to correct the inadequate and faulty citrus laws that are the basic reason for the deplorable low market returns.

Whatever citrus legislative program that is presented at this coming session of the legislation must give consideration to facts as they have been disclosed in relation to the maturity law.

A maturity law that does not have as its major objective the control of the number of hours that oranges and grapefruit can be kept in the gas coloring rooms will be of no use whatever in stopping the flow of unedible fruit to the markets at the beginning of each season.

The following is quoted from a statement made by one of the largest wholesale receivers of Florida citrus in New York City: "Our experience in connection with Florida Citrus shipments during the months of September and October has been that the fruit proves very unsatisfactory both as to keeping quality and taste, thereby creating on the consumer the impression that Florida citrus fruit can not be relied upon."

Such an attitude on the part of the wholesale receivers of citrus is a reflection of the consumers attitude towards Florida Citrus.

There is no hope for better prices for Florida citrus until the trades attitude is changed by Florida discontinuing the shipping of unedible fruit in the months of September and October.

Fruit passing the maturity test as to ripeness, in the months of September and October, before passing through gas coloring rooms in the packing house is edible fruit.

Both Oranges and Grapefruit that pass in September and October and because of the lack of rind color—are not acceptable to the trade; are subjected to the degreening process.

When this coloring process was perfected the limit of hours that fruit could be kept in the gas coloring rooms, without actually damaging the fruit, in the months of September and October, was defintely determined by scientific investigation.

The shippers in this state have strayed a long way from the proper use of the gas coloring rooms when they keep fruit in these rooms in the months of September and October up to 110 hours.

It is a scientific fact that fruit kept 48 hours in coloring rooms is destroyed as to taste and keeping qualities.

Florida ships very little green fruit —it does ship several million boxes of cooked fruit at the beginning of every season.

FRANK R. HAMMETT
Managing Trustee,
Florida Citrus Fact Finding
Institution, Orlando.

TELL OF BEAUTIFICATION

The important role that flowers, trees, and shrubs play in the establishment and maintenance of an attractive home has been stressed by Mrs. Julia Price, of the Walton County Home Demonstration Council, and Miss Eloise McGriff, Walton home agent, in recent visits to clubs, homes, and schools.

Mrs. Price and Miss McGriff gave demonstrations in planting cuttings, transplanting, pruning, and care of shrubs and flowers. Mrs. Price's success with chemicals in growing rooted plants was of special interest to many of the girls and women with whom she talked.

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Recent Changes In The Florida Citrus Industry--Oranges

U. S. DEPARTMENT OF AGRICULTURE, AGRICULTURAL ADJUSTMENT ADMINISTRATION

Orange production in Florida ranks first in the citrus industry of the State. Of the 30,000 growers engaged in citrus production, approximately 95 percent produce oranges. The value of the crop accounts for around two-thirds of the total Florida on-tree farm value for citrus fruit.

For the United States as a whole, Florida ranks second in the production of oranges, first place being held by the California-Arizona area. Florida is the principal tangerine-growing State, furnishing practically all of the commercial supplies on markets during the shipping season. Approximately 35 percent of the total United States supply of oranges comes from Florida. Most of these are sold on markets east of the Mississippi River, the leading outlets being located in the northeastern and southern groups of states.

The production of Florida oranges has increased steadily, and continued increases are anticipated. The production of tangerines in Florida has increased very rapidly, the greatest rise taking place in recent years.

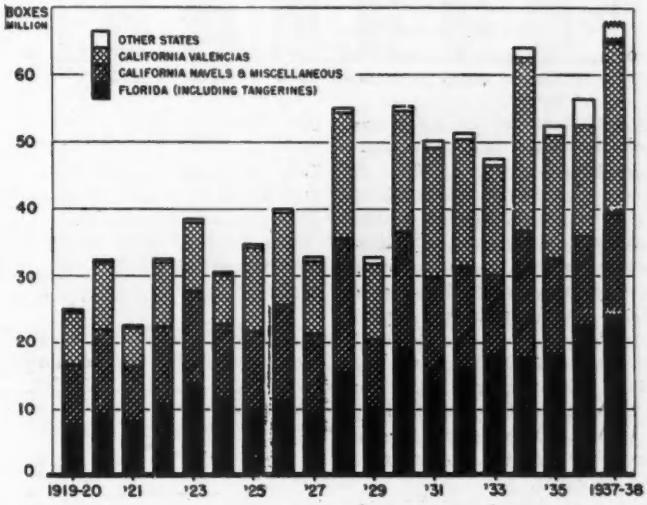
Florida crops of oranges averaged 10,300,000 boxes and tangerines averaged 850,000 boxes in the decade since 1920. Production increased appreciably since then, oranges averaging 15,800,000 boxes and tangerines 2,150,000 boxes a year. The 1937-38 crop of oranges, placed at 23,750,000 boxes, is the largest in the history of the State. This crop represents about one-third of the total United States production.

In recent years, the annual on-tree value of oranges and tangerines has represented about 72 percent of the value of all citrus fruit grown in Florida. On-tree value of Florida oranges and tangerines, in the period from 1925-26 through 1930-31, averaged $19,300,000. A low point in value was reached in the 1932-33 season when the figure dropped to nearly $9,350,000. On-tree value has averaged over $24,600,000 since the 1934-35 season.

Numerous changes have taken place with the development and growth of the Florida orange industry. Some of the economic trends and forces responsible for these changes are indicated in the following pages.

The increase in United States production of oranges during the past decade has been more pronounced than in years previous. The trend in orange production for the principal areas is shown in the graph below.

ALL AREAS SHOW STEADY INCREASE IN ORANGES



In the period from the 1919-20 season through the end of the 1927-28 season, production of oranges showed only moderate increases. The first big crop of oranges in the United States came in the 1928-29 season when 55,131,000 boxes were produced. This crop was 72 percent higher than the average production in the period from the 1919-20 season. The Florida crop reached a high of 15,588,000 boxes, exceeding by 51 percent the previous average production. In California a total of 38,994,000 boxes of oranges was grown. This crop was 82 percent greater than the average production since the 1919-20 season.

The United States orange crop dropped to 32,621,000 boxes in the 1929-30 season. The next year, however, production in all areas exceeded the 1928-29 level. The national crop totaled 55,362,000 boxes, the crop in Florida 19,211,000 boxes and 35,470,000 boxes in California. Since the 1930-31 season the tendency has been for production of oranges to approximate the crop growth in that season.

All-time records of orange production for the United States as a whole are exceeded by the estimated 1937-38 crop of over 68,600,000 boxes. Out of this amount, Florida production is estimated at the record high of 23,750,000 boxes while a second high is set for California with an estimated crop of 42,200,000 boxes. Florida's previous record crop was in 1936-37 when 22,500,000 boxes were produced, while the high for California was in the 1934-35 season when the crop totaled 45,047,000 boxes.

The recent increases have occurred in oranges grown in Florida and Valencia oranges grown in California. Some increase in orange production has taken place in Texas. Production of California navel oranges has continued about uniform with only a slight tendency to increase.

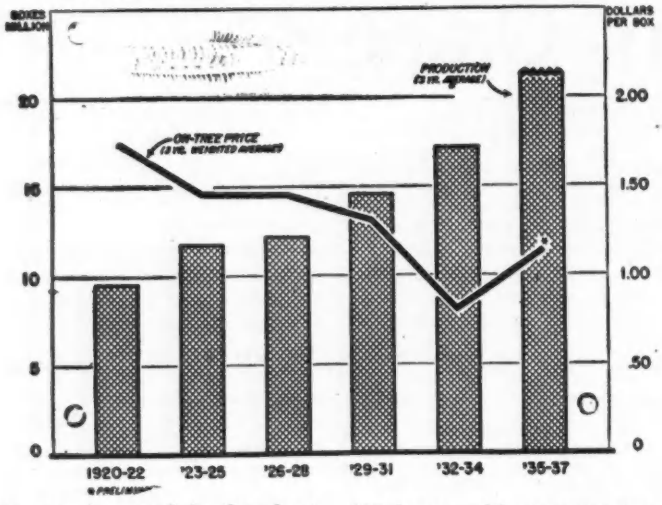
Florida Orange Production and Price Trends

The production of oranges in Florida gradually increased until about 1928, but since then the increase has been very marked. Lower price levels accompanied the rise in production.

The general course followed by

Florida orange production (including tangerines) and on-tree price to growers are indicated in the above graph on the basis of 3-year averages from 1920-21 to 1937-38.

DECLINE IN ORANGE PRICE TREND ACCOMPANIED GREATER PRODUCTION



During the first 3-year period shown on the graph, Florida orange crops increased slowly and the weighted average on-tree price followed a downward trend with the rise in production. The crop in the 3-year period beginning with the 1926-27 season averaged 12,196,000 boxes and the on-tree price averaged $1.45 per box. In that period, the 1928-29 crop totaled 15,500,000 boxes, the biggest up to that time, and the on-tree price averaged 76 cents.

For the next 3-year period beginning with the 1929-30 season, production averaged 14,578,000 boxes and the on-tree price average went down to $1.34. All previous crop records were broken in the 1930-31 season of that period, when 19,211,000 boxes were produced in Florida.

Florida orange production for the 3-year period beginning with the 1932-33 season climbed to an average of 17,300,000 boxes. This coupled with factors in the general depression, forced on-tree prices down to an average of 82 cents. This price was considerably below the downward trend which Florida orange prices had been following as production increased.

Average production for the 3-year period beginning with the 1935-36 crop advanced sharply. While the average on-tree price for that period climbed above the depression level, the price for the period is at a point in line with the downward price trend which has accompanied increased production. Average production of Florida oranges in the last 3-year period is slightly in excess of 21,400,000 boxes, with an average on-tree price a little over $1.10 per box. This 3-year period witnessed the production of two record crops in the Florida orange industry.

The 1936-37 crop totaled 22,500,000 boxes and the 1937-38 crop exceeds 23,750,000 boxes, the largest production in the history of the industry. A freeze which caused serious damage to California citrus fruit together with general improved economic conditions resulted in an improvement in prices for the 1936-37 Florida orange crop despite its large size. With record production of oranges in the 1937-38 season in both California and Florida, prices of Florida oranges have been relatively low during this season.

Continued increases in Florida orange production are expected as trees increase their bearing capacity and young trees come into production.

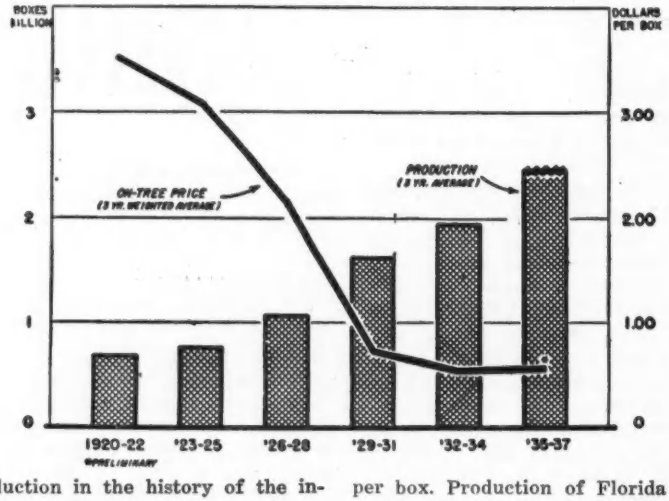
Florida Tangerine Production-Price Trends

Tangerines are of considerable commercial importance in Florida. In recent years the industry has been confronted with sharply declining prices accompanying a trend of greatly increased production. The trends of Florida tangerine production and on-tree prices on a 3-year average basis are indicated in graph below.

In the 1920-21 through 1922-23 period, production averaged 683,00 boxes, and the on-tree price averaged $3.54 per box. With a slight increase in production to 767,000 boxes in th 1923-25 through 1925-26 period, prices fell off to $3.08 per box. In the 1926-27 through 1928-29 period, production increased further to 1,067,000 boxes and the on-tree price dropped to $2.15. A rise in production to 1,633,000 boxes in the 1929-30 through 1931-32 period saw a sharp drop in on-tree prices to 72 cents per box.

Florida Tangerine production continued to climb in the 1932-33 through 1934-35 period, going to 1,950,000 boxes. The on-tree price for that period averaged 54 cents per box. Production of Florida tangerines showed a more marked rise for the 1935-36 through 1937-38 period, the crop averaging 2,450,000 boxes. The on-tree price for this period is estimated to average only 56 cents per box, showing practically no recovery from the depression period levels.

SHARP DROP IN FLORIDA TANGERINE PRICES CAME WITH GREATLY INCREASED PRODUCTION



Age Of Orange Trees By Areas Of Production

Of the 34,638,000 orange trees of all varieties in the producing States

of California, Florida, Texas, and Arizona, 45 percent are not in full production and range in ages from 5 to 15 years .California ranks first with 19,471,000 orange trees, while Florida is second with 13,135,000. Texas and Arizona combined have approximately 2,000,000 orange trees.

A total of 9,040,000 trees, or 26 percent of all the orange trees in the four producing areas, is in the age group ranging from 5 to 10 years. A little over half of these, 4,402,000, are in California, while Florida has 3,271,000. Texas has 917,000, and Arizona has 450,000 in this age group.

The number of trees 11 to 15 years old is 6,690,000, or 19 percent of the total. Most of the trees in this age group, 3,289,000, are in Florida, while 2,881,000 are in California, 492,000 are in Texas, and 28,000 are in Arizona.

Orange trees from 16 to 20 years old number 5,696,000, or 17 percent of the total. Orange trees 21 years old and over number 13,212,000, or 38 percent of the 34,638,000 trees of all varieties of oranges in the four producing areas.

Age Of Orange Trees By Varieties In Areas

A greater total of trees, as well as more young trees, are planted in Valencia and other late varieties of oranges than in navels and other early varieties. The age group of trees by varieties and by States are shown in the graph above.

Navel and other early varieties of oranges total 16,227,000 trees, of which only 39 percent range in ages from 5 to 15 years and are not in full production. California and Florida have about the same number of trees planted to early varieties, although California has by far the larger number of old trees.

Trees ranging in ages from 11 to 15 years number 2,850,000, or 18 percent of the total. More than half of these, or 1,520,000, are in Florida, while California has 1,012,000 and Texas 299,000.

Trees from 16 to 20 years of age number 2,208,000, or 14 percent of the total. Most of these 1,375,000, are in Florida. California has 799,000.

Trees 21 years old and over number 7,644,000, or 47 percent of the total of 16,227,000 planted in early varieties of oranges. Most of these old trees, 4,984,000, are in California, while Florida has 2,606,000.

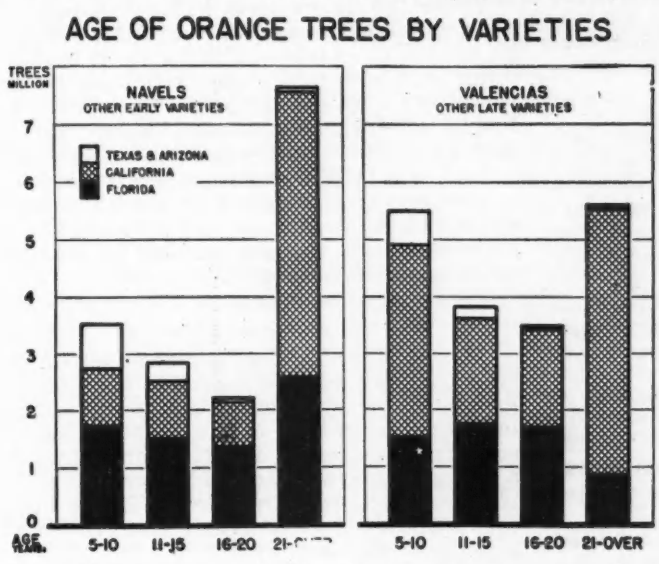
Valencias and other late varieties of orange trees total 18,411,000, of which 51 percent ranging in age from 5 to 15 years, are not in full production. California, with 11,683,000 of these trees, has about twice as many as Florida.

Of these late varieties, trees from 5 to 10 years old, number 5,515,000, or 31 percent of the total. Of this number, California has 3,389,000 trees, while Florida has 1,533,000. Texas has 381.000 trees, and Arizona has 212.000.

Trees from 11 to 15 years old number 3,840,000, or 20 percent of the total. California has 1,752,000 trees in this age group, while Florida has 1,710,000.

Trees 21 years old and over equal 5,568,000, or 30 percent of the total. Of this number California has 4,673,000, while Florida has only 884,000.

The number of trees which fall in various age groups indicates an upward trend of orange production for the next few years. The rate of increase will probably be slightly less than that of the past decade. Indications also are that production of Valencias and other late varieties may be expected to increase more rapidly than the production of navel and other early varieties. This is indicated by the large number of young trees in the late varieties not in full production. Production of navel and early varieties of orange may be expected to remain stationary in California (mainly because of the large number of old trees in full bearing), and show somewhat of an increase in other producing states.



Large quantities of oranges are marketed from the California-Arizona area during the entire year. Navel and other early varieties of oranges begin moving to markets in November, about the same time that Florida starts shipping early and midseason varieties in volume. The Navel orange shipping season usually ends in early May. California-Arizona shipments of Valencia and other late oranges ordinarily begin in March, but do not get fully under way until April and are completed usually sometime during November, when the movement of navel oranges begins from this area.

The biggest share of oranges shipped from the California-Arizona area is represented by Valencia and other late varieties. Most of these are moved during months in the late spring, summer, and early fall, when Florida ships relatively few oranges.

Shipments of oranges from Texas and other producing states as yet are not large compared with those from Florida or California. Texas shipments, while small, are great during December, January, and February.

Florida Oranges Lead In Eastern Auctions

From the beginning of November to the end of May, Florida oranges lead in monthly volume in eastern market centers.

Unloads in the 5 eastern auction cities for the 3 seasons averaged 34,489 cars a year. Of this total, 18,315 cars came from Florida, 16,124 from the California-Arizona area, and 50 from other producing sections. The five central auction cities are, in the main, supplied with oranges from the California-Arizona area. While the bulk of the oranges on eastern markets during the Florida shipping season comes from Florida, unloads in the five central cities from this State during the same months are considerably less than half of the

(Continued on page 20)

The Citrus Industry

with which is merged The Citrus Leaf
Exclusive publication of the Citrus Growers and Shippers

Publication office 550 North Broadway, Bartow, Florida
Telephone ____ 269

Published Monthly by
ASSOCIATED PUBLICATIONS CORPORATION
S. L. FRISBIE - - - - - - - - President
S. LLOYD FRISBIE - - - - - Secretary-Treasurer
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CITRUS LEGISLATION

The next session of the state legislature which convenes in April will have presented to it for consideration many proposed new citrus laws.

Elsewhere in this issue is carried a summary of the proposed laws which the committees from the Florida Growers, Inc., have prepared, designed naturally and properly in an effort to provide the grower in Florida with a profit from his citrus crops, by setting up a legislative program which would do away with abuses which have proved harmful to the industry.

This publication during the entire span of its existence has maintained that the grower must be furnished with every protection to provide him with a reasonable return upon his investment and labor if the industry were to prosper as it should.

If this Grower's legislative program provides the means of bringing about such a conclusion, and we believe that it does hold these potentialities, it should have the wholehearted support of the legislature.

The maturity legislation in the past has never been able to prevent the shipment of fruit to market before it was really edible. This one fault in legislation has been responsible for the breaking of the market early each season for many years, and for establishing in the mind of the consumer a distrust for Florida fruit which has been a terrific handicap.

It is to be hoped that this session of the legislature may by carrying out the wishes of the Growers group or through some other legislation provide a means of preventing the recurrence of the unsound practice of shipping fruit to market which we in Florida would not think of placing on our own tables, as well as providing the remedy to many other citrus grower problems.

Let us hope that our legislative members bear in mind the necessity of lending every possible assistance to the growers, who are the backbone of Florida's greatest industry and who must be afforded every possible means of making a legitimate profit from their endeavors if that industry is to thrive.

THE HORTICULTURAL SOCIETY

The annual meeting of the Florida State Horticultural Society will be held on April 18, 19 and 20 this year at the Hollywood Beach Hotel in Hollywood, and, as usual secretary Bayard Floyd, together with the board of directors, is busily engaged in arranging a program which will provide much of interest and information to the growers of the state.

Col. Floyd has over a period of many years been an indefatigable worker in behalf of the Horticultural Society and he has never failed to provide a program full of interest to the large group of growers of the state, which supplied them with data they could use effectively in the practical development of their groves and farms.

While the program is not yet complete, an outstanding speaker of national importance will be one of the features of the program, in addition to a group of authoritative addresses by specialists who will provide the very latest information concerning many of the numerous problems which confront Florida growers.

Last year in Winter Haven it is estimated that approximately a thousand growers attended the various sessions. It is to be hoped that fully as large a group will be present at this year's meeting in Hollywood.

Plan now to be present.

An entirely new deal has been set up in the fruit trade by what is known as the Fruit Telegraphic Delivery Service. Under this set up an individual anywhere in the country desiring to send fruit, including citrus, to an individual in a distant state, may advise his local dealer who will wire the order to a dealer in the home of the proposed recipient and the fruit will be delivered the same day.

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The Growers' Own Page

This department is devoted to the growers, for their use in giving expression to their views and a discussion of growers' problems. Any grower is welcome to make use of this department for the discussion of topics of interest. The only requirements are that the articles must be on some subject of general interest, must be reasonably short and must be free from personalities. The editor assumes no responsibility for views expressed, nor does publication imply endorsement of the conclusions presented.

COLOR ADDED

Crescent City, Fla.,
Feb. 6, 1939

Dear Editor:

My attention has just been called to an article in the December issue of "The Citrus Industry" by Frank R. Schell, under the heading "Color-Added" and its relation to our citrus problems. I would appreciate it if you would allow me to make a reply to same through your columns.

The author of the article in question states that "The color added process has brought millions of dollars in premiums paid for color added fruit over uncolored fruit of the same quality, to the growers and shippers of the state of Florida". Is there any truth in this statement? It resembles the braying of a conceited jackass and I am thoroughly convinced of its utter falsity and the proof of the said falsity is found in the next sentence of the same paragraph, which reads: "The Florida citrus industry is no philanthropist where processing is concerned." As the author states he is the originator of this process it is only reasonable to concluded that he is no philanthropist. Suppose now that we consult Webster's dictionary and see just what a philanthropist is:

"One that loves mankind and seeks the good of others." As he is engaged in a business that is not philanthropic and of such vast proportions and so far reaching in its effect it is only natural to presume that he is a distructive erudite social parasite or a public enemy of high polish and appearance.

Now this gentleman goes on to say "possibly all processing is a necessary evil, at best—but it is necessary." Every reasonable thinking person knows that the only necessary feature about evil of any kind is its total eradication, and the most effective way to do that is to remove the source. He says that it would be preferable to ship our fruit just as it leaves the trees but that it is impossible, and the industry's use of this process proves its usefulness, but is this true? A vigorous NO is the only logical answer that can be deduced, for how can any good come from the "evil" practices of a "Non-philanthropic" (?) industry?

He also states that "numerous factors affect the flavor of oranges" . . "Soaking tank mixtures, and rough handling have their effect on flavor." And he might just as well have added that the coloring room, where the fruit is confined and subjected to high and unnatural temperatures and poisonous gasses some times for several days at a time, also has its effect upon flavor, and believe me the effect as well as the practice is to say the least MOST DAMNABLE. If any one thinks that gas used to color green immature fruit is not poisonous, just let him shut himself up in one of these rooms for a few minutes during this coloring process and it will take only a few minutes to convince him of the truth of this statement. Oh, well, what else could any one expect as the results of an anti-philanthropist running wild. The author seems to try to create the impression that the northern consumer is mentally deficient when he throws into the trash can the tasteless unpalatable fruit that looked so beautiful before he purchased it, and he suggests as a cure-all for this situation that a law be enacted to prohibit any one from marketing his fruit as "tree-ripened" or "tree- colored." Now wouldn't this be just perfectly lovely (??????)

This same gentleman goes on to quote an old bulletin issued by the department of agriculture the first two sentences of which reads as follows: "Some of the early fall varieties of oranges and grapefruit ripen while the fruit is still green in color. Later varieties that mature in the spring or summer assume the color of full maturity during the winter while the fruit is still immature, but when warm spring weather occurs the rind may turn green again." It should be borne in mind that it says MAY turn green but it seldom does except under poor or unnatural cultural conditions. In referring to the quotation above it can be seen by careful study that the second sentence proves the first one is false. NO ORANGE EVER RIPENS UNTIL AFTER IT HAS REACHED ITS NATURAL COLOR ON THE TREE. I do not care how many government bulletins make statements to the contrary. After all the numerous mistakes that have been made by the Department of Agriculture during the past six years it is not hard to believe that it may have made a few before that time.

The author states in another paragraph with reference to early varieties: "The early varieties were held back until they attained the orange color which the consumer, mistakenly believes is the indication that an orange is ripe. By that time these early oranges were often unfit for food. They were insipid, in many cases so dried out that under our present laws they would be classified as unmarketable culls." This statement is misleading as well as incorrect as I have never known any variety of orange to show any sign of dryness except from frost damage until late in the spring. If any one has a variety of orange that dries out as soon as it gets its natural color on the tree I am in agreement that it should be processed early but the only ethical process in this case would be to dig the tree up by the roots and burn it up. There are three main reasons that cause this drying out: First improper soil; second, improper cultural practices; third, trying to grow an orange on a root that nature never intended an orange to grow on. There is no reasonable excuse why a man with good choice fruit should have to market in competition with such trash picked green and immature then baked and painted and in many cases dosed with arsenic so as to kill the acidity and give it a semblance of sweetness.

The author quotes statistics freely and juggles them expertly with the result that does a great credit to his ability to deceive the uninformed but to follow his light is like one lost in the swamp trying to follow a will-o'-the-wisp which only leads him deeper and deeper into the bog, and gives one reason to believe that there must be some truth in the saying: "If all the statisticians in the world were laid end to end it would be a damned

(Continued on page 14)

Nature Cries For Help
Present One -- The Hig
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Calcium Nitrate

(Nitrate Nitrogen and Water Soluble Calcium)

CALCIUM NITRATE is an ideal Spring application to citrus groves.

CALCIUM NITRATE is the only material which provides quick-acting nitrate nitrogen, with water-soluble calcium—two essential plant foods for the price of one.

CALCIUM NITRATE tones up the trees, promotes a vigorous bloom, heavy set, and uniform maturity.

CALCIUM NITRATE improves quality, too.

Write for free copy of our valuable book on fertilizer.

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**Cwith each passing season, become
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NITROPHOSKA

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A Ready Complete Fertilizer

There are ten different analyses of NITROPHOSKA, and grades are available with minor elements in quantities fully meeting recommendations of agricultural authorities.

NITROPHOSKA provides an even, steady and long lasting supply of nourishing plant foods. NITROPHOSKA users find this rich COMPLETE fertilizer is most economical, and does produce better fruit at lower cost. Much of the earliest fruit in the State is produced with NITROPHOSKA.

y T Field Men Are Freely At Your Service

rn Company

te butors

Florida

FRUIT COSTS

GROWERS OWN PAGE

(Continued from page 11)

good thing."

I have repeatedly shipped packages of fruit to friends in the north and as often told that it was the best fruit that they had ever eaten and that they could not get anything like it up north. Why cannot they get it? Florida has hundreds of thousands of boxes of just such fruit as I shipped. Why cannot the people in the north get it?

A few years ago a large beautiful car stopped in front of my house. Five or six well dressed people got out and wanted to get some oranges. My fruit had all been picked and I told them so. There happened to be a few truck loads of culls out in the grove that I had hauled back from the packing house and dumped for fertilizer. Referring to these they asked if they might have some and I replied that they were just rotten culls. They were insistent that I let them have some so I told them to help themselves. They poked around in that pile of rotten fruit and picked out and ate all they wanted and exclaimed how delicious it was, and wanted to know if they could take some of it with them, and I told them "Sure, go ahead, take all you want, but it was not good for anything." They replied that it was so much better than anything they ever got up north. Do you suppose that these northern tourists could be properly classified as fools. NO. The fools are the ones that ship such trash onto the northern markets that our rotten culls seem superior. If it were not for the artificial coloring process such a condition could not exist. It may be possible for artificial coloring to be done judiciously, but at its best it is deceptive and how far can human nature be trusted to practice deception judiciously?

Yours for a better reputation for Florida fruit,

L. P. DeWOLF

USE OF CITRUS JUICES IN BAKING IS NOTHING NEW TO FLORIDA WOMEN

The use of citrus juices in baking emphasized recently by the announcement that grapefruit was being used in bread, is nothing new to many Florida home-makers, says Miss Isabelle Thursby, State Home Demonstration Department foods specialist.

"Many of our rural women who have lived in citrus groves for years and city women, as well, have known for a long time that the juice of lemons, sour or wild oranges, grapefruit, or sweet oranges used for all or part of the liquid in baking will make light, tender, and palatable doughs and batters," Miss Thursby explains.

Citrus juices, according to the home demonstration specialist, are used by many Florida women to produce novel and highly desirable characteristics in baked goods such as an unusually delicate crumb, a thin light brown crust, and light appetizing sandwich breads, pastries, cakes, and steamed puddings. They do not overlook the fact that this is a very effective way of bringing healthful fruit acids into diet of the family.

"For cakes and quick breads, particularly," says Miss Thursby, "citrus juices may be used just as sour milk or buttermilk is used for all or part of the liquid in the recipes. Half a teaspoon of soda is usually needed to neutralize the acid of three-fourths of a cup of orange or grapefruit juice and, generally, will leaven two cups of flour. If fruit juice is only mildly acid add only a fourth of a teaspoon of soda for each three-fourths of a cup of juice. The soda should be sifted with the flour."

UREA NITROGEN—HAS ALL THREE OF THESE DESIRABLE QUALITIES

SCORE

UREA

RESISTANT TO LEACHING. It "stays put." Effective in wet seasons. +

EQUIVALENT ACIDITY LOW. Citrus trees respond best to nitrogen from non-acid-forming or only slightly acidic sources . . . . . +

AVAILABILITY COMPLETE. 100% available . . . . . +

. . . IS TRIPLE-PLUS NITROGEN

WHEN the plant food in a fertilizer possesses the foregoing three properties, you may be sure it will give good results. Du Pont UREA NITROGEN rates plus (+) on all three. That's why manufacturers are using more and more "URAMON" and Urea-Ammonia Liquor in their complete fertilizers and top-dressers. That's why more and more citrus growers, when they apply nitrogen only, are turning to "Uramon," the semi-granular, Triple-Plus high-nitrogen fertilizer, which is free-flowing, easy to handle and apply. Your fertilizer manufacturer is in a position to supply your requirements. Write for booklet "Urea—Triple-Plus Nitrogen."

"Uramon" Fertilizer Compound
Reg. U.S. Pat. Off.
(42% *Urea Nitrogen*)

• • •

Urea-Ammonia Liquor
(45% *Nitrogen*)

DU PONT

E. I. DU PONT DE NEMOURS & CO., INC., Ammonia Dept., Wilmington, Delaware . . . Orlando, Florida

FLORIDA GROWERS, INC., DETAIL PROPOSED RE - CONSTRUCTION LAWS TO STATE PRESS.

(Continued from page 3)

these funds be left to the discretion of Dr. Wilmon Newell, of the University of Florida, and the United States Agricultural Extension Service, and it is presumed that he will direct the continuance of this investigation under Dr. A. L. Stahl. Dr. Stahl already has a mass of information on this subject that has not yet been indexed and made available.

Cultural Practices

It is known that cultural practices have much to do with the quality of fruit. The organization will recommend an annual appropriation of $25,000 for the Florida Citrus Experiment Station to continue investigations by Dr. A. F. Camp, Senior Horticulturist to gather further information about the effect of cultural practices and processing practices on fruit quality. These studies will include study of the fruit under all handling conditions and how it carries from the tree to the consumer.

Field Crates

The proposed law states exactly inside measurments whereas the present law does not indicate whether the specified measurements are inside or outside. The proposed law states the exact number of cubic inches a crate shall contain and the size of cleats on the top or on the bottom of the box that have anything to do with the quantity of fruit it will carry. This will enable inspectors to determine at once whether or not a crate comes within the law. This has been impossible in the past.

Bond And Liscense

Henry L. Pringle, of Leesburg, has outlined proposed changes in the bond and liscense law. Growers have lost thousands of dollars due to the fact that bonds required of citrus buyers have been entirely inadequate. It is also possible under the present law for an individual or firm to fail for thousands of dollars under one name and immediately obtain a liscense under some other name and begin all over again. And the Commissioner of Agriculture may be thoroughly aware of the circumstances yet he has no authority to refuse the liscense provided the application is accompanied by the bond for $500.00 now required. A new law proposes to raise the bond requirement to $5,000 and to empower the liscensing authorities to refuse altogether to grant the liscense if upon investigation they regard the applicant morally and financially unfit to receive the confidence of growers.

Elimination

W. J. Steed has proposed a law for the elimination of low grade fruit in surplus years. It would prevent the sale or use by Canneries of goods not being shipped for fresh fruit purposes. However, in surplus years should No. 3 fruit bring a price as high as 50 cents per box for oranges and tangerines, or 40 cents for grapefruit it could be disposed of on obtaining a permit.

The law would define the term "surplus year" and would go into effect automatically when, and if, a surplus condition should exist. It is designed to combat the tendency of growers to rush to dispose of their fruit because of large yields, thus giving buyers an advantage and driving prices downward.

Industry Stabilization

A tax on citrus production will be proposed to create a fund to divert surplus fruit and retire marginal groves. This is a long range proposition to stabilize citrus production and to bring production in line with demand. This is a feature for future consideration and would only become effective if similar laws were in effect in Texas and California.

State Regulation

J. J. Banks, Jr., of Orlando, chairman of the Marketing Agreement Committee, is directing the preparation of a state Marketing Law which proposes state regulation of citrus movement. The law is intended to secure under state regulation the benefits expected to be derived from Federal Marketing Agreements, and in some cases to supplement and enlarge the benefits of Federal regulations through intra-state regulation.

State Inspection

Glen Grimes, of Lakeland, attorney for the Citrus Commission, has proposed a law requiring that State Inspection of citrus fruit be the final and authoritative inspection. Federal inspections are less stringent than state inspections and shippers have taken advantage of this situation in the past. This proposal received the approval of the board of directors.

Legislative Committee

All of these major purposes and others of less consequence are in the making and have been approved in principle by the State Organization, and up to date, by a number of county organizations.

The work of all committees, subcommittees and outside help has been supervised by E. G. Todd, of Avon Park, chairman of the General Legislative Committee.

Feed Your Grove As You Spray With TC Brand

TENNESSEE CORPORATION

65% MANGANESE SULPHATE

For Correction Of "MANGANESE STARVATION"

● Giving citrus trees the required amount of vital mineral elements through nutritional sprays is an accepted practices. "Manganese starvation" may be corrected or prevented by using Manganese Sulphate as a spray or included in the fertilizer you apply to your grove. You feed your grove EXTRA mineral elements when you use Tee-Cee Brand 65% Manganese Sulphate in either Spray Form Grade or regular Fertilizer Grade—because:

Extra Value In Tee-Cee Brand Manganese Sulphate

In addition to Manganese required to correct or prevent "chlorosis," Tee-Cee Brand 65% Manganese Sulphate analyzes high percentages of Sulphates of COPPER, IRON, ZINC, MAGNESIUM and CALCIUM in water soluble form. Other minerals, also, are present in lesser amounts. You get fruit with improved NATURAL COLOR—inside and out—when trees are adequately fed with Manganese Sulphate.

See your local fertilizer dealer, or write for more information.

Distributed by:

U. S. Phosphoric Products Corp.

Tampa, Florida

- 53% Tri-Basic Copper Sulphate
- 89% Zinc Sulphate
- Copper Sulphate

ORANGE BREAD

Requirements: 2 cups flour, 1 teaspoon soda, ¾ teaspoon salt, ½ cup sugar, 1 egg, well-beaten, ¾ cup strained orange juice, 2 tablespoons lemon juice, 1 teaspoon grated orange rind, ¼ teaspoon grated lemon rind, and ¼ cup melted shortening.

Sift and measure flour. Sift again with baking soda, salt and sugar. Combine well-beaten eggs, orange juice, lemon juice, grated rind and melted shortening. Add to dry ingredients, stirring until well mixed. Turn into a small bread tin, lined with greased wax paper. Cover and let stand 20 minutes. Bake in a moderate oven one hour.

The annual loss of soil fertility through erosion and leaching is estimated to be at least seven times the amount used by crops.

The LYONIZER

Department

COMPILED BY THE LYONS FERTILIZER CO.

Personnel Changes

J. H. Rickborn, formerly associated with the Lyons Fertilizer Company, on March 1 resumed his connection with this firm as special representative in sales work. Mr. Rickborn has been successfully engaged in field service in Florida for the past 10 or 12 years.

George Phillips, who has represented the Lyons Fertilizer Company in Orlando for the past 12 years, has been transferred to Winter Haven, where he will have associated with him Felton Scott. Both men are experienced and well qualified in sales and field service.

James M. Sample has recently joined the Lyons Fertilizer Company as sales representative in south Polk, Highlands, Hardee, DeSoto and Lee counties. Mr. Sample has been engaged in field work in Florida for a number of years.

We feel that the addition of these experienced men to our field force will serve to strengthen our staff materially.

QUALITY DEMANDED

We cannot help but feel elated over the reports which many of our customers make to the effect that because of the excellent quality of their fruit they are able to get the top of the market for their crops.

More and more the demand for Quality Citrus Fruit becomes dominant in the market. Not only do the record of prices furnish proof of this fact, but visitors to the eastern and mid-western markets return with definite reports of the disregard in which inferior fruit is held by purchasers in those centers.

Lyons Fertilizers are noted for their remarkable ability to produce the greatest possible quantities of Quality Fruit—a fact which with each passing year becomes more evident to Florida's citrus growers.

NOT MANY years ago Asa Candler, Atlanta business man, sold the Coca-Cola Company of which he was the principal stockholder, to a group of purchasers for a sum reported to be approximately $40,000,000. In computing the assets of Candler's company the actual physical property amounted to only a very small portion of the sale price. The vast proportion of the value of the firm was centered in the name which carried with it an enormous good will value.

This is only one of thousands of kindred examples. Indeed, every business which grows and thrives must build for itself a reputation for integrity, sound merchandise and responsible service if it is to develop into anything more than a one-time order proposition.

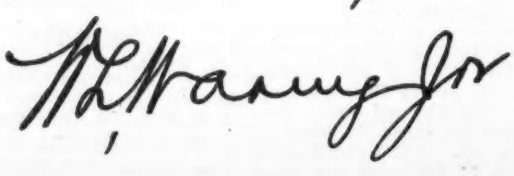
Just a moment's thought will permit you to select any number of such concerns with whom you consciously or unconsciously do business because of your confidence in their representations and in their merchandise — and your knowledge that any claim they may make will be carried out to the letter.

Individuals play an important part in the development of such institutions, but individuals never, in these days of keen competition reach a point where they overshadow the standing of any important business in the minds of the customers they serve.

Trade names, literally thousands of them, stand as symbols of character and responsibility. Choose any number at random — Chase & Sanborn, Campbells, Manhattan, Hanan, Remington, Woolworth, Pepsodent, International, Ford, Paramount, Bayer's, Studebaker, Pillsbury's, Stetson, and any number of others. Each of them instantly identifies for you some commodity recognized as outstanding because of the integrity the makers have built into their product.

So the Lyons Fertilizer Company, from the very beginning, has adhered with unswerving purpose to the manufacturing of fertilizer products which would be recognized by users throughout Florida as the very finest that money and intelligent manufacturing methods could produce.

Those of us who are responsible for this purpose are proud of the reputation our products have among our patrons, and we realize that it is this integrity of product which popularizes those products, rather than any representation any of us may make as individuals—which is as it should be.



ADVERTISEMENT — THE LYONS FERTILIZER CO.

APRIL SUGGESTIONS FOR GROVE CARE

Prepared by Horticultural Department, Lyons Fertilizer Company

CULTIVATION

Cultivation should depend somewhat on weather conditions. If weather is dry weeds and grass should be kept down in unirrigated groves.

FERTILIZER

Bearing trees that did not re-receive spring application should be fertilized this month.

PEST CONTROL

Rust mites should be watched carefully, and with extreme drought dead wood will be prevalent, creating excellent harbor for melanose. Spray if necesary.

COVER CROP

A good cover crop is essential for soil improvement. Arrange for seed now, so that you will have them when ready to plant.

PRUNING

Cut out all dead and weak wood and remove water sprouts.

Idle Fancies

'Tis said that "the early bird catches the worm," but the Florida tourist who returns too early to his northern home catches a blizzard—or is caught in one.

• • •

One thing about the income tax report: It informs you as well as the government how you got your income and what you did with it.

• • •

Something few of us know with out the aid of the tax report.

• • •

We have known one or two people who were so busy with their own affairs that they had no time to busy themselves with the affairs of others.

• • •

And we have known thousands who were so busy with the affairs of others that they had no time for their own.

• • •

Even in the horse-and-buggy days there were back-seat drivers.

OUTLOOK BRIGHTER

Dollar Valencias are serving to hearten Florida growers very materially after a season which in many respects has been highly unsatisfactory.

Each day's reports indicate that the Valencia market is strengthening and extra fine quality fruit is, as usual, commanding a marked premuim. Several lots of fine Valencias have gotten an extra ten cents more than the dollar.

There is still a most urgent need for rain among growers who are not irrigating their groves, although scattered showers have been helpful.

Because these Products are Manufactured in Florida for use on Florida Groves

We Recommend

ORANGOL SPRAY EMULSION

OBRITE DUSTING SULPHUR

"SUPERIOR" WETTABLE SULPHUR

For control of citrus insects and disease

Maunfactured by

Orange Manufacturing Company
Orlando, Florida

Lyons Fertilizer Company
Distributors

Little Bits of FUN

FUTILE GESTURE

Discussing the type of milk which should be supplied to school children, the chairman of the town's health committee said:

"What this town needs is a supply of clean, fresh milk, and we should take the bull by the horns and demand it."

DATES WAY BACK

First Student: "I wonder how old Miss Jones is."

Second Student: "Quite old. I imagine; they say she used to teach Caesar."

MINISTERIAL TACT

A minister was known by a few of his parishioners to be fond of Cherry Brandy and one of them in a mischievous frame of mind offered to present him with a bottle on condition that it was fully acknowledged in the next issue of the Church Magazine. The offer was promptly accepted and in due course the notice appeared in the magazine: "The Vicar thanks Mr. McTavish for his gift of fruit and the spirit in which it was given."

AFFECTIONATE

Diner: "This steak is not very tender."

Waiter: "Well, did you expect it to put its arms around you and kiss you?"

FOLLOWING ORDERS

"You look all out of sorts. What's the matter?"

"Plenty. On account of my rheumatism the doctor told me to avoid dampness—and you've no idea how silly I feel sitting in an empty bathtub and going over myself with a vacum cleaner."

DIFFERENCE

"What's the difference between a sewing machine and a kiss?"

"One sews seams nice and the other seems so nice."

The Citrus Blackfly...A Third Pest Eradicated From Florida

BY WILMON NEWELL AND ARTHUR C. BROWN*
STATE PLANT BOARD OF FLORIDA

Three hits, three runs and a few errors is the way a baseball player might describe pest eradication efforts in Florida during the past 25 years. The third hit and run were obtained aganst the citrus blackfly on the island of Key West—the first two being widely known efforts directed against citrus canker and the Mediterranean fruit fly. The blackfly is not as serious a pest as the other two, but nevertheless it is a dangerous insect which could cause citrus growers tremendous expenses for control measures.

Citrus blackfly was discovered in Key West on August 10, 1934, and work looking to its eradcation was immediately inaugurated. Quarantines were established to prevent its spread to the mainland. Eradication should have been easy on an isolated island, but because of a public which had no commercial groves to lose and consequently was not vitally interested in ridding their premises of the pest, the task required three years. Fortunately, the State Plant Board was able to lift the quarantine on April 13, 1938, just as the new overseas highway was being opened to traffic.

The history of this insect and the endeavors of the State Plant Board of Florida to prevent its entry into this state and to remove it after it became established here form an interesting story of plant protection, covering the period from the very formation of the Plant Board in 1915.

Citrus blackfly was first brought to the attention of the Board in May 1916 when Quarantine Inspector J. H. Montgomery made a trip to Nassau to investigate rumors that citrus canker occurred in some of the Bahama Islands.

While failing to find canker, Dr. Montgomery did discover the presence of blackfly, a then little-known insect pest. Many citrus trees on the island of New Providence had died from its attacks, and others had been cut down by their owners after ineffective efforts to control the pest. Subsequent to Dr. Montgomery's visit the Colonial Legislature passed a Plant Protection Act, and a systematic attempt was made to control blackfly. These efforts were ineffective, at least on the Island of New Providence.

As a result of inquiries made by the board, John R. Johnston, chief, Commission Sanidad Vegetal, Havana, Cuba, in a letter dated May 31, 1916, stated that blackfly had been found near Guatanamo in August 1915. In December 1916 it was reported from the vicinity of Havana, where it was causing considerable damage to citrus and mango trees.

The senior author visited Cuba in October 1917 to secure more information concernng blackfly, urge greater activity in Cuba towards subduing the pest, and arrange for such cooperation with the Cuban government as would tend to reduce the chances of the pest being introduced into Florida. In November 1917 the Cuban congress appropriated the sum of $50,000 for blackfly control. At the request of the Cuban authorities, the Plant Board loaned the services of three of its best inspectors, Frank Stirling, L. R. Warner, and H. D. Bollinger, to assist in organizing and supervisng control activities. From November 1917 to April 1918 a more or less vigorous spray campaign was waged against the pest in the vicinity of Havana and the insect population was meterially reduced. No efforts of consequence was made to control blackfly at Guatanamo. The spraying activities near Havana were discontnued, and the insect soon became as abundant as before.

In August 1917 blackfly was found at both ends of the Panama Canal by Harold Morrison of the Federal Horticultural Board. It has been reported from Jamaica and other West Indian islands, as well as from Costa Rica and other Central American countres.

Repeated interceptions at Florida ports of live immature stages of blackfly on boutonnieres worn by passengers, on plants and in shipments of plant products from Cuba and Nassau convinced the Plant Board that introduction into Florida was inevitable. It was felt, however, that the degree of risk might be reduced somewhat by reduction in the severity of the infestation in the two islands, and that this could be best brought about through the introducton and establishment of natural enemies of blackfly. The Board interested officials of the United States Department of Agriculture and the Cuban government in financing an expedition to Malaya to collect parasites and predators of the pest.

It was found that in the Far East blackfly is of economical importance due almost exclusively to mortality effected by natural enemies. Of the parasites found in the Orient, **Eretmocerus serius** Silvestri has been established in Cuba where it is very effective. Among the Coccinellid predators, a species of **Cryptognatha** and **Scymnus smithianus** Silvestri are now established in that country. These latter are apparently not as effective as **Eretmocerus.** The initial introduction of the parasite into the Bahama Islands for some reason did not result in establishment, and a second introduction has been made. The Bahama situation is a striking example of the uncertainty of biological control and emphasizes the necessity of having well developed and effective mechanical measures available to supplement natural control.

Forewarned is forearmed,and when an infestation of backfly was found on the Island of Key West August 10, 1934, by Plant Board Inspector J. H. Sealy, eradication measures were immediately instituted. It was known that in Panama the life cycle varies from 45 to 113 days, and plans were made at Key West for the application of an oil spray at intervals of 20 days. Specialists of the Bureau of Entomology, United States Department of Agriculture, recommended the use of an oil with an unsulphonatable residue of not less than 85 (preferably 90 or over) and a viscosity of between 60 and 100 degrees Saybold (preferably in the 60's

* Talk before Cotton States Branch, American Association of Economic Entomologists, Tampa, Feb. 21, 1939.

but not exceeding 100 degrees). An oil of this grade was not readily available at that time, and the Bureau approved the use of a parrafin oil with an unsulphonation of 76 and a viscosity of 105 degrees. The emulsion was made of two gallons of fish oil soap, two gallons oil, and one gallon of water. The oil content of the spray mixture as used varied with the season and ranged from ⅝% to 1%. It is interesting to note that even though this oil spray was applied to citrus trees every 20 days from September 1934 to June 1937, except for about two months during the sprng of 1936, no apparent damage was caused to the trees by the repeated applications.

At first the spray was applied to all plants—23 in number—known to be hosts of the blackfly in Key West. Citrus and mango appeared to be the primanry hosts, and as eradication work progressed and the insect population decreased the oil was applied to these two hosts only. Amounts of the mixture used varied with the size of the tree, but sufficient material was applied to drench all parts of the tree. Applicatons were made by the use of power sprayers belonging to the Bureau of Entomology and the Plant Board. Pressure was maintained at about 400 pounds.

Difficulties encountered in the application of eradication measures were many and varied. There were no commercial plantings jeopardized at Key West and as a rule the citizens were indifferent as to the outcome of the project. Unsupported by the weight of public opinion, without which any eradication project is severely handicapped, the Board was forced to appeal to the courts, both civil and criminal, many times. It was not until May 1936 when a favorable ruling of the State Supreme Court convinced objectors that continued opposition would be of no avail that real progress in eradication was made.

Other difficulties encountered at Key West were unique. Rain water stored in cisterns during the rainy season is the only source of fresh water on the island. As our forces used several thousand gallons daily, the problem of securing fresh water during the dry season, from the last of October to the middle of May, was a serious one. It was met chiefly through the ability of the inspector's in charge, H. S. McClanahan, to persuade citizens to have spare cisterns pumped out and cleaned at no cost. Water thus secured was stored in our own cisterns.

The infested area was wholly with-

(Continued on page 22)

IT'S CHEAPER TO KEEP YOUR GROVE IN GOOD HEALTH THAN TO "BRING IT BACK" . . . . .

• It's always cheaper to buy a needed "ounce of prevention" than a "pound of cure." Your grove represents a long-time investment—and only proper care and adequate fertilization can preserve its productivity. Failure one year to give trees the right plant foods in the right amounts at the right time may result in crop losses later. Certain it is that QUALITY fertilizer is essential for production of quality fruit—and healthy trees can better withstand shocks of poor weather conditions. GULF brands of Friendly Fertilizers have helped growers protect their grove investments year in and year out— because they have proved that QUALITY fertilizers cost less in the long run. Ask the Gulf Field Man in your section to recommend a fertilization program to keep your grove in good health.

GULF *Brands of* FERTILIZER

Friendly Fertilizers Keyed to Your Soil

For Everything that Grows in Florida . . .

THE GULF FERTILIZER COMPANY

36th Street, South of East Broadway, Tampa, Florida

East Coast Factory — PORT EVERGLADES, Florida

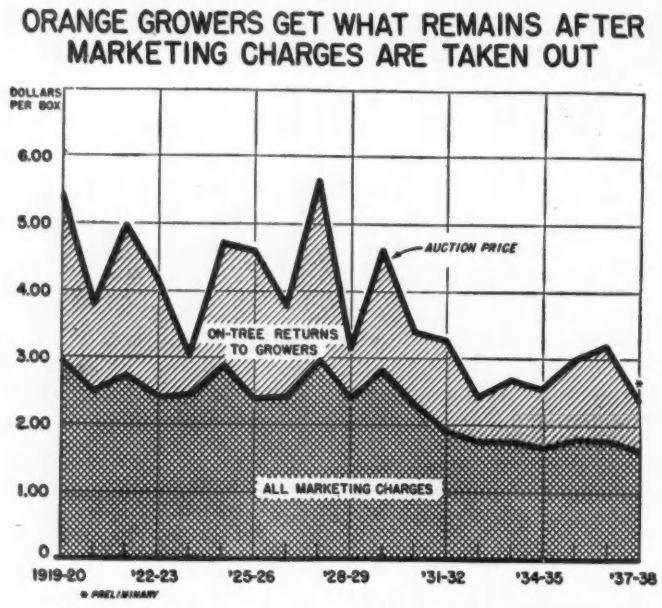
RECENT CHANGES IN THE FLORIDA CITRUS INDUSTRY
ORANGES

(Continued from page 9)

total unloads from all of the areas.

Total unloads of oranges at the five central auction cities from the 1934-35 season through the 1936-37 season averaged 14,979 cars a year. Of this amount, the California-Arizona area supplied 10,076 cars, Florida 4,405 cars, and other producing areas 498 cars. The oranges from other producing areas came largely from Texas.

The course which grower returns, auction prices and marketing charges for oranges have followed from 1919-20 to the 1937-38 season are indicated in the graph above.



Marketing charges for oranges have shown some tendency to decline in recent years, particularly since the depression set in. These marketing charges include payment for picking, hauling, packing, loading, freight and refrigeration, and selling the fruit in the terminal markets.

Since marketing charges tend to remain fixed during a given season, whereas terminal market prices change from day to day, any rise or fall in terminal market prices has a direct effect on the returns to growers. Marketing charges ranging from $1.65 to $1.75 must be deducted from the sale price of Florida oranges at terminal markets in order to arrive at the return available for payment to growers.

Terminal market prices are influenced by many factors. The level of consumer income, shipments of citrus fruit, shipments of competing fruits, and the quality and size of citrus fruit shipped are among the most important. A change in any one of these will result in a change in terminal market prices of citrus fruit unless such an influence is offset by changes in any of the other factors.

The bulk of the oranges shipped from Florida is sold in markets east of the Mississippi River, the principal outlets being in the northeastern group of States.

New York is the biggest outlet for Florida oranges, taking 11,536 cars, or 29 per cent of the total for which destinations were reported. Of this amount, approximately 79 per cent was sold on the New York City auction market. The second largest outlet is Pennsylvania, which took 5,329 cars of Florida oranges, or over 13 per cent. Over 67 per cent of these were sold in the Philadelphia and Pittsburgh auction market cities. Massachusetts ranked third in importance as a market receiving 3,588 cars, which represented 9 per cent.

Second in importance as a regional outlet for Florida oranges is the southeastern group of States. In this group, Georgia ranked first by taking 2,023 cars, or 5 per cent.

In the north central group of States, Ohio was the principal destination of Florida orange shipments.

Shipments of Florida oranges west of the Mississippi River are relatively small, with oranges moving west of the Rocky Mountains only in rare instances.

Practically all of the commercial shipments of tangerines come from Florida. The main markets for Flor-

APRIL 18-20
WORLD FAMOUS BIG GAME FISHING THRILLS AWAIT VISITORS AND DELEGATES TO THE CONVENTION OF THE
FLORIDA STATE HORTICULTURAL SOCIETY
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HOLLYWOOD, FLORIDA

ida tangerines are located east of the Mississippi River, especially in the northeastern and north central groups of States. Destinations were reported on 6,526 cars of Florida tangerines out of a total of 6,914 cars shipped during 1936-37 season.

New York State received 1,741 cars, or approximately 27 per cent of the tangerines from Florida for Pennsylvania ranked second, with 1,021 cars, or over 15 percent of the total.The third most important market was Ohio, which received 516 cars, representing 8 per cent. Illinois received 410 cars and ranked fourth in importance as an outlet. The fifth most important market for Florida tangerines was Michigan, receiving 320 cars.

In the southeastern group of States. Georgia was the main outlet, taking 298 cars, or 4.5 per cent of the total. North Carolina took 231 cars and Tennessee 197 cars.

The most important market for Florida tangerines west of the Mississippi River was Misouri, which took 153 cars. Shipments to States beyond those bordering the Mississippi River were of minor importance, many of them receiving no tangerines from Florida.

Florida's relative nearness to important market centers has made it possible for this State to enjoy a freight rate advantage over other citrus producing areas. This advantage was definitely increased by competition which developed among the various carriers for the State's citrus transportation business.

The freight rate per standard box of fruit shipped from Florida is less in all instances except one. In this one instance the rates are the same for fruit shipped to the Chicago market from Florida and Texas.

Florida's greatest rate advantage is on shipments to eastern seaboard and northeastern markets where population is most concentrated. During the Florida shipping season, these markets are dominated by grapefruit and oranges from that state.

Shipments of citrus fruit from the California-Arizona area move into markets east of Denver, Colorado, under a uniform freight rate of $1.11 per standard box for oranges and 96 cents for grapefruit. The rate for Florida oranges and grapefruit moving to New York and Baltimore, and Philadelphia is 62 cents, while the rate for Texas fruit is 98 cents per standard box. Florida's rate to Cleveland and Detroit is 84 cents, and the Texas rate is $1.08. The rate to Chicago from both States is 85 cents per box. Florida's rate to Pittsburg is 82 cents and the rate for Texas is $1.-14. The rate to St. Louis from Florida is 78 cents and from Texas it is 80 cents. Shipments of oranges and grapefruit can move from Florida to Boston for 74 cents per standard box, while the rate from Texas is 98 cents. The Florida rate to Cincinnatti is 71 cents and from Texas it is 97 cents.

Changes In On-Tree Value of Florida Citrus

The depression period from 1930 through 1933 was one in which the on-tree value of Florida citrus fruit was relatively low. Production at the beginning of this period had started to increase more rapidly than in previous years. At the same time, the income of consumers fell sharply, reaching a low point in 1932. The on-tree value of Florida citrus fruit in the 1932-33 season was slightly in excess of $15,000,000, while for the two previous seasons it had averaged a little over $26,000,000.

The recovery made in the on-tree value of Florida citrus fruit since these depression years, has been due largely to the gains in consumer income. However, the record orange crop of the 1937-38 season forced a reversal in the upward trend which the on-tree value of Florida citrus fruit had followed since the 1932 depression period.

PHYTONOMIC OIL SPRAYS

What They Are and What They Mean to The Citrus Grower

Invention of "PHYTONOMIC" oil sprays, of which VOLCK Oil Sprays are the original and outstanding line, enabled the grower to apply more effective dosages, with greater commercial safety, for control of scale and other insects on growing plants.

To make an oil stock "phytonomic" the low refined pale or red oils are especially treated to remove certain spray-purpose impurities that under some conditions present a hazard too great for commercial safety.

"Phytonomic" Refers to Safety

The word "Phytonomic" was coined to describe the normally favorable reaction of plants in foliage when sprayed with oils of the spray-purpose purity invented by Mr. William H. Volck and long since generally accepted in informed pest control circles as **the principal index of safety in oil sprays.**

The phytonomic oil stock selected for use in FLORIDA VOLCK Oil Emulsion and VOLCK READY-MIX Emulsifiable Oil Spray has a high degree of insect-killing quality, volatilizes from the plant as rapidly as is practicable for its intended uses, is refined to the phytonomic stage that years of experience in Gulf states have shown to offer a wide margin of commercial safety, and is prepared to give the spreading, wetting and depositing qualities required for Gulf State citrus pest control.

Proven "Phytonomic" Oil Sprays

"FLORIDA VOLCK" is emulsified phytonomic petroleum oil, 83% active as an insecticide, ready for dilution and use in almost any equipment and water supply. This is the popular brand of phytonomic oil spray that has for years been in most general use in Florida.

"VOLCK READY-MIX" is now 98½% phytonomic petroleum oil, plus emulsifier, ready to be emulsified by a minute or more of agitation or pumping, together with about an equal amount of water, in an average spray rig, before the tank is filled or while it is filling. This form of oil spray is a more recent development that many growers have preferred. Good, but not necessarily excessive, agitation is required in making the original mixture. We do not know of any water supply that requires conditioner with the present "VOLCK READY-MIX" formula.

Unsurpassed For General Clean-up

There is no adequate substitute for "VOLCK" as a general clean-up spray to control scale, Whiteflies, Mealybugs, Red Spiders, Spotted Mites, Rust Mites, and to remove Sooty Mold Fungus.

For further information, address Nitrate Agencies Company, Jacksonville; Jackson Grain Company, Tampa; Hector Supply Company, Miami; or California Spray-Chemical Corporation, Orlando, Fla. Adv.

KEENAN SOIL LABORATORY

Lake Wales, Florida

Is your average cost per year for Citrus grove fertilizer more than $20.00 per acre and proportionately less on young trees? If so, your cost is greater than it need be.

Thousands of acres of Citrus Groves are being operated profitably under our recommendations at less than $20.00 per acre per year, FOR FERTILIZER.

Satisfied GROVE OWNERS using our service will tell you of the present excellent condition of the trees, improved production both in quantity and quality at less cost.

See us at our new location at 142 E. Stuart Ave., Lake Wales, Florida.

KEENAN SOIL LABORATORY

THE CITRUS BLACKFLY.... A THIRD PEST ERADICATED FROM FLORIDA

(Continued from page 19)

in the limits of the City of Key West. The majority of the properties are small ones, and practically all of them are fenced, the gates of which are frequently locked. In some cases entry into the walled yards was possible only through the house itself, which meant that the spray crews had to drag many feet of host through the front door and out a side door or window into the yard. When the spray crews reached the yard, they frequently found all available space filled with the family laundry. In fact, many a return trip was necessary in order to spray a property on which the laundry was hanging when the crew first called.

Many trees grew close to the houses, and in order to keep the spray from drifting into open windows, it was frequently necessary to hang tarpaulins between the tree and the house. Tarpaulins were part of the equipment of each outfit, and were used to cover fish ponds, cisterns, and even the guttering and troughs leading from the house to the cistern.

Between February 26, 1937, when the last live immature stages of blackfly were found, and June 30, 1937, primary hosts received six applications of spray. During the same period four complete, intensive inspections were made with negative results. With this information at hand the Board, on June 30, 1937, ordered discontinuance of all eradication activities, with the exception of quarantine enforcement.

In the fall of 1937, and again in the spring of 1938, intensive inspections were made of host plants in Key West. When no indications of blackfly were found on either survey, Chairman R. P. Terry of the State Plant Board felt justified in concluding that eradication was an accomplished fact, and on April 13, 1938, authorized discontinuance of quarantine enforcement. That this conclusion was warranted is evidenced by the fact that another intensive inspection of the infested area was made last fall with negative results.

The total cost of the project was $197,464.95. Federal contributions, through the Bureau of Entomology and Plant Quarantine, United States Department of Agriculture, were $36,000, while State funds expended amounted to $161,464.95. With proper cooperation on the part of property occupants at Key West this project would have been completed in one year, and at a considerable reduction of the total amount expended.

LIME GROWERS COMMITTEE URGES CAUTION ON PLANTINGS

Heaviest production on record, and much of it unharvested for lack of demand — that's California's lime story this season, says the Lime Growers Committee of California. Deliveries to Calvo Growers of California for five months (September through January) totaled 761,000 pounds. Growers averaged just over two cents per pound up to January. For the same five months a year earlier, growers averaged over five cents per pound on 352,000 pounds.

Most California limes mature in the fall and winter. Limes are essentially a "hot weather" seller. Extremely large or small sizes, of either type lime, have little or no market at any time, it is said.

Florida has some 3500 acres of limes and produced over 7,000,000 pounds of fruit in 1938. About 70% of the trees are five years of age or under. There are some 700 acres of limes in California, mostly seedless. Considering Florida, and forseeing heavily increasing domestic production for years ahead, the Lime Growers Committee urges caution in setting out further lime plantings. — California Citrograph.

CLASSIFIED Advertisments

The rate for advertisements of this nature is only five cents per word for each insertion. You may count the number of words you have, multiply it by five, and you will have the cost of the advertisement for one insertion. Multiply this by the total number of insertions desired and you will have the total cost. This rate is so low that we cannot charge classified accounts, and would, therefore, appreciate a remittance with order. No advertisement accepted for less than 50 cents.

CITRUS BUDS AND SEEDLINGS—Jaffa, Pineapple, Hamlin buds on Sour Stock. Sour Orange Seedlings.. R. P. Thornton and H. S. Pollard, Copothorn Nurseries, Box 2880, Tampa, Florida.

CITRUS SEEDLINGS
Cleopatra, Sweet Seedlings, Sour Orange, Rough Lemon, Grapefruit. New low prices. Grand Island Nurseries, Eustis, Fla.

VERY EARLY ORANGE—Fine flavor and juicy. Plant something you can sell in September, get more money, get it early, eliminate losses from drops and frozen fruit. POMONA NURSERIES, Dade City, Fla.

ALYCE CLOVER
Fresh crop, cleaned, and inoculated. Also Crotalaria Spectabilis, Intermedia, Striata. Write for new low prices. Grand Island Nurseries, Eustis, Fla.

VERY EARLY ORANGE—For profit plant Soar's Sweet, the new early orange that passes high test early in September; ripens twenty to thirty days before standard early varieties, has better flavor, very juicy and does not dry out on lemon. Pomona Nurseries, Dade City, Fla.

ALYCE CLOVER SEED. Ripe and cleaned. Ideal cover and hay crop, Write for information. P. E. Synder, Box 866, Lakeland, Fla.

CROTALARIA SPECTABILIS — Fresh crop, $15.00 per 100 lbs. f. o. b. Frostproof, Fla. Milton Woodley, Frostproof, Fla.

CHOICE Rough Lemon Seedlings 6 to 20 inches high, $10.00 per thousand. Olan Altman, Sebring, Florida.

WANTED — Two thousand sweet seedling root stock, lining-out or better. H. M. Sherwood, Fort Myers, Florida.

"MAIL ORDER Operator desires contact with grower of high grade avocado pears. Have interesting proposition for grower of highest quality fruit." F. R. Gardner, P. O. Box 528, Greenville, Pa.

FOR SALE—2000 Riverside No. 10 Grove Orchard Oil Heaters used only two seasons, excellent condition. 70c each, F.O.B. Marianna subject to prior sale. Marianna Fruit Company, Marianna, Fla.

AVOCADOS — All desirable varieties. Haden Mangos, Persian Limes, superior budded Loquats. Coral Reef Nurseries Co., Homestead, Florida.

CITRUS NURSERY TREES
All standard varieties and novelties, on Cleopatra and Sour Orange root. Grand Island Nurseries, Eustis, Fla.

MANURE — Stable and Dairy Manure in car lots. Write for prices. P. O. Box 2022, Jacksonville, Fla.

STANDARD varieties of citrus trees including Persian limes and Perrine lemons at reasonable prices. Ward's Nursery, Avon Park, Fla.

GROWERS
Will pay cash for your orange wood whether in trunks or other forms. State full details as to location of groves, etc., in your first letter. Write: T. J. Bumford, 41 Maiden Lane, New York

FREE PUBLIC LIBRARY
JACKSONVILLE, FLORIDA

New Manager American Fruit Growers Inc.

American Fruit Growers In. announce the appointment of John D. Kerr as Vice President and General Manager in charge of all operations. William H. Baggs, who formerly occupied this post, moves up to president, and James S. Crutchfield, founder of the company and President since its organization in 1919, becomes Chairman of the Board.

As a result of a coast-to-coast sales and market analysis made by a leading firm of commercial engineers, management is now developing a new sales program embracing the latest and most modern methods of food merchandising. Primary objective of the new program is to provide growers with maximum returns and consumers with uniform quality produce at a fair market price.

JOHN D. KERR

This plan is expected to have a stabilizing effect on the entire industry, and is in harmony with government efforts to develop a more orderly flow of produce from grower to consumer. Sales emphasis for its No. 1 grade produce will be centered on the familiar "BLUE GOOSE" brand. American Fruit Growers is now the largest organization in the world offering the retailer and the consumer a wide line of fresh fruits and vegetables under one brand.

Mr. Baggs, the new President, came from the Baltimore and Ohio

(Continued on page 15)

• QUALITY
• MATURITY
• SIZE of FRUIT

are materially influenced by the summer application of fertilizer in your grove. If the fruit you pick next season measures up to your expectations — it's essential that you give thought now to providing your trees with the right plant foods in the right amounts at the right time to produce quality fruit. Let the Gulf Field Man in your section suggest an economical summer fertilization program based on the needs of your grove. GULF Brands of Friendly Fertilizer include time-tested formulae made specifically for summer application. They have what it takes to grow better fruit and to keep trees in good health. Call your Gulf Field Man today and let him tell you the complete story of GULF service.

GULF *Brands of* FERTILIZER

Friendly Fertilizers

For Everything that Grows in Florida . . .

THE GULF FERTILIZER COMPANY

36th Street, South of East Broadway, Tampa, Florida

East Coast Factory — PORT EVERGLADES, Florida

"Here's the fertilizer that I recommend"

Successful growers place special importance on the summer fertilizer application. It is the application that provides the tree with food during the months when the development of the new crop puts a severe strain on its strength. And since this application must not only mature the existing crop, but also force the new growth on which the following year's crop will be hung — growers want a complete, balanced fertilizer. That is why they specify Armour's.

Armour's is made in Florida by men who know the requirements of Florida crops and soils. Its performance in the groves has won it wide popularity among the growers who know the best.

A card to this office will bring an experienced Armour field representative, who will analyze the requirements of of your grove and make valuable recommendations for increasing the quality of your fruit.

ARMOUR FERTILIZER WORKS

Jacksonville, Florida